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REMARKS

*Amendments*

Claim 1 is amended to recite an *in vitro* application. By *in vitro* we encompass our described methods of making siRNA in cells *in vitro* (e.g. Specification, p.6, lines 25-31) and in cell lysates *in vitro* (e.g. Specification, p.4, line 32 – p.5, line 7). These amendments introduce no new matter.

*Request to Correct Record*

Applicants believe that Action relies at least in part on an erroneous attribution inadvertently introduced into the record. At p.6, line 10, the Action asserts that both applicants and the Declarant have stated that the genus of dicer proteins is "large, and structurally diverse". Neither the applicant nor the Declarant has made such inaccurate statement. What both the applicant and Declarant stated was that the recited Dicer protein comprises "a well-known family of large non-canonical RNase III enzymes." This says that the Dicer protein is a large, non-canonical RNase III enzyme – it does not say anything about the size or structural diversity of the family of Dicer proteins, which is neither particularly large nor structurally diverse. To preserve the accuracy of the record, we respectfully request that the Examiner correct this apparent misstatement.

In addition, we suggest that the Action's proposal to require a "lysate" in the claims is not consistent with the cell-based methods reported, *inter alia*, at p.6, lines 25-31.

*35USC112, first paragraph (written description)*

The written description question is whether the application would have reasonably conveyed to a person of ordinary skill in the art that applicants invented the claimed subject matter.

The claims are drawn to a method of making siRNA comprising the steps of: (a) recombinantly coexpressing a Dicer protein with an R2D2 protein to form a complex comprising the R2D2 protein and the Dicer protein, and (b) contacting the complex with a target double-stranded (ds) RNA comprising a predetermined sequence under conditions wherein the complex cleaves the dsRNA into siRNA.

The recited Dicer protein comprises a well-known family of large non-canonical RNase III enzymes (e.g. Bernstein, et al., Nature 409, 363-6, 2001). Specification, p.1, lines 25-26. Recombinant Dicer proteins have been used to make siRNA; see, Myers et al., 2003, Nature Biotechnol 21, 324-8; Beach et al., 2003, US Pat Appl Publ US2003/0084471; Zhang et al., 2002, EMBO J 21, 5875-85; and Dicer-based siRNA generation kits are commercially available (Gene Therapy Systems, Inc., San Diego, CA, Catalog No.T51001). Specification, p.2, lines 5-8. The recited Drosophila R2D2 protein is a well-known, art-recognized protein, for which the Specification provides a Genbank Accession No. (Specification, p.2, lines 10-11).

The Specification is directed to those skilled in the art, those skilled in the art recognize the scope and meaning of the art-recognized, recited Dicer and Drosophila R2D2 proteins, and the Specification provides adequate written description to convey to a skilled person that applicants invented the claimed method. Declaration under 37CFR1.132 (of record).

*35USC112, first paragraph (enablement)*

The enablement question is whether the application would have enabled one skilled in the art to practice the invention as claimed without undue experimentation.

The claims are drawn to a method of making siRNA comprising the steps of: (a) recombinantly coexpressing a Dicer protein with an R2D2 protein to form a complex comprising the R2D2 protein and the Dicer protein, and (b) contacting the complex with a target double-stranded (ds) RNA comprising a predetermined sequence under conditions wherein the complex cleaves the dsRNA into siRNA.

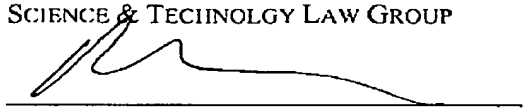
The recited Dicer proteins comprise a well-known family of large non-canonical RNase III enzymes (e.g. Bernstein, et al., Nature 409, 363-6, 2001). Specification, p.1, lines 25-26. Recombinant Dicer proteins have been used to make siRNA; see, Myers et al., 2003, Nature Biotechnol 21, 324-8; Beach et al., 2003, US Pat Appl Publ US2003/0084471; Zhang et al., 2002, EMBO J 21, 5875-85; and Dicer-based siRNA generation kits are commercially available (Gene Therapy Systems, Inc., San Diego, CA, Catalog No.T51001). Specification, p.2, lines 5-8. The recited Drosophila R2D2 protein is a well-known, art-recognized protein, for which the Specification provides a Genbank Accession No. (Specification, p.2, lines 10-11).

Those skilled in the art would have no trouble substituting one known Dicer protein for another in the assay. As the claims require that the recited complex cleave the dsRNA into siRNA, the claims require a Dicer protein functional in the recited method. To practice the method with additional, alternative Dicer proteins, the skilled practitioner needs to do no more than routine screening, using the recited method itself, to confirm that the candidate protein is operative in the method.

The Specification is directed to those skilled in the art, the specification provides adequate description to enable one skilled in the art to recognize the scope and meaning of the recited Dicer and Drosophila R2D2 proteins, and to practice the invention without undue experimentation. Declaration under 37CFR1.132 (of record).

The Examiner is invited to call the undersigned with any suggestions for amending the claims or for further clarification of any of the foregoing. Please charge our Deposit Account No. 19-0750 (order UTSD:1493) any fees, including any necessary extensions of time, relating to this communication.

Respectfully submitted,
SCIENCE & TECHNOLGY LAW GROUP



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